

Work Order ID 57268-2

Wednesday, March 31, 2010 11:23:54 AM

Rework as per <sup>new</sup> dr. rev B.

MF 10-4-7 Page 1

Item ID: D3909-041

Revision ID:

Item Name: Crosstube Lug Assembly, Fwd

Start Date: 3/31/2010 Start Qty: 6.00

Required Date: 4/5/2010 Req'd Qty: 6.00

Reference:

Approvals: Process Plan: MF

QC:

Date: 10-4-01

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3909

A B

100

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

110



Small Fab

Small Fab

Memo

1- Assemble as per dwg  
Trim rivet to 1.185" long

0.00

0.00

120



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

8/10/12/16

MF 10-4-20

8/10/04/19 (3)

Pro ->

(+3)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 57268**

Wednesday, March 31, 2010 11:23:54 AM



Page 2

Item ID: D3909-041

Revision ID:

Accept



Setup Start



Item Name: Crosstube Lug Assembly, Fwd

Stop



Start Date: 3/31/2010 Start Qty: 6.00

Required Date: 4/5/2010 Req'd Qty: 6.00

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130



Packaging

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00

Memo

0.00

Packaging

140



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

10/04/20 (3)

10/04/20 JF  
JMF 10-4-20



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, March 31, 2010 11:23:54 AM

Page 1

Work Order ID: 57268

Parent Item: D3909-041

Parent Item Name: Crosstube Lug Assembly, Fwd

Comments: IPP RevA: New issue DD verified by:EC

Start Date: 3/31/2010

Required Date: 4/5/2010

Start Qty: 6.00

Required Qty: 6.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3909-1 Lug Plate, Fwd Crosstube		Manufactured	No			100	Each	18.0000	12.0000			

Warehouse Location	Loc Qty	Loc Code
Main Warehouse ENG	2	
55704	2	
Main Warehouse ST095	16	
57118	16	

D3909-3 Fwd Lower Attach Arm		Manufactured	No			100	Each	8.0000	6.0000			
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Warehouse Location	Loc Qty	Loc Code
Main Warehouse ST095	8	
56952	8	

D3909-5 Eyebolt Stud		Manufactured	No			100	Each	8.0000	6.0000			
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Warehouse Location	Loc Qty	Loc Code
Main Warehouse ST095	8	
56953	8	

Scrap

replate  
D3909-5 prelim.  
B 57410 x4  
57409 x2

B 3909-5

B 57410

B 57409

①

②

8/10/04/20

MF 10-4-05

MF 10-4-5

MF 10-4-5

P10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Print

day, March 31, 2010 11:23:54 AM

Page 3

der ID: 57268

em: D3909-041

em Name: Crosstube Lug Assembly, Fwd

ts: IPP RevA: New issue DD verified by:EC

Start Date: 3/31/2010

Required Date: 4/5/2010

Start Qty: 6.00

Required Qty: 6.00

ment Item ID/ Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS20615-4M20		Purchased	No			100	Each	80.0000	18.0000			
RIVET												

★ SEE W/D CHG OVER

MS21042L3



Nut

Purchased No

MS21043 3

Jul 12 11:05

4. per Kit

112314

Warehouse  
Location  
Main Warehouse  
ST323  
113254

Loc Qty Loc Code

111438

80  
80  
100 Each 1,871.000 30.0000

1114324

7

11

10-4-05

MK

10-4-20

Warehouse  
Location  
Main Warehouse  
ST300

Loc Qty Loc Code

110844 35  
111274 27  
111668 58  
112314 285  
113523 17  
113537 465  
113644 984

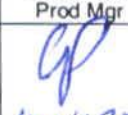
10-4-5

Wednesday, March 31, 2010 11:23:54 AM

Shop Packet Print

Page 3

Dart Aerospace Ltd

W/O: 57268		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10.04.20	110	Acceptable to use MS20615-4M18. BIN: <u>M114349</u>	SS	10/04/20	9	 10.04.20 GSI 042	

Part No: D3909-041 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



# Picklist Print

Wednesday, March 31, 2010 11:23:54 AM

Page 2

Work Order ID: 57268

Parent Item: D3909-041

Parent Item Name: Crosstube Lug Assembly, Fwd

Comments: IPP RevA: New issue DD verified by:EC

Start Date: 3/31/2010

Required Date: 4/5/2010

Start Qty: 6.00

Required Qty: 6.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
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D3910-1		Manufactured	No			100	Each	0.0000	12.0000			
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Crosstube Lug

D3917-1		Manufactured	No			100	Each	0.0000	12.0000			
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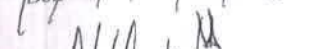


Washer

AN940-10		Purchased	No			100	Each	80.0000	30.0000			
----------	--	-----------	----	--	--	-----	------	---------	---------	--	--	--



Bolt



N/A 10.04.01

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST351

80

106605

23

109297

4

112720

53

AN940-10		Purchased	No			100	Each	8,584.000	30.0000			
----------	--	-----------	----	--	--	-----	------	-----------	---------	--	--	--



Washer



N/A 10.04.01

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST348

8584

19356

200

5519

8384

D2640-6

LANYARD

Qty 1

AS3112

BS0665

Shop Packet Print

95 3

95 3

N/A 10.04.01

Page 2

Wednesday, March 31, 2010 11:23:54 AM

Dart Aerospace Ltd

W/O: 57268		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/01		add MS17984C413 M 114340	ME	10-4-20		h	

Part No: D3909-041 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

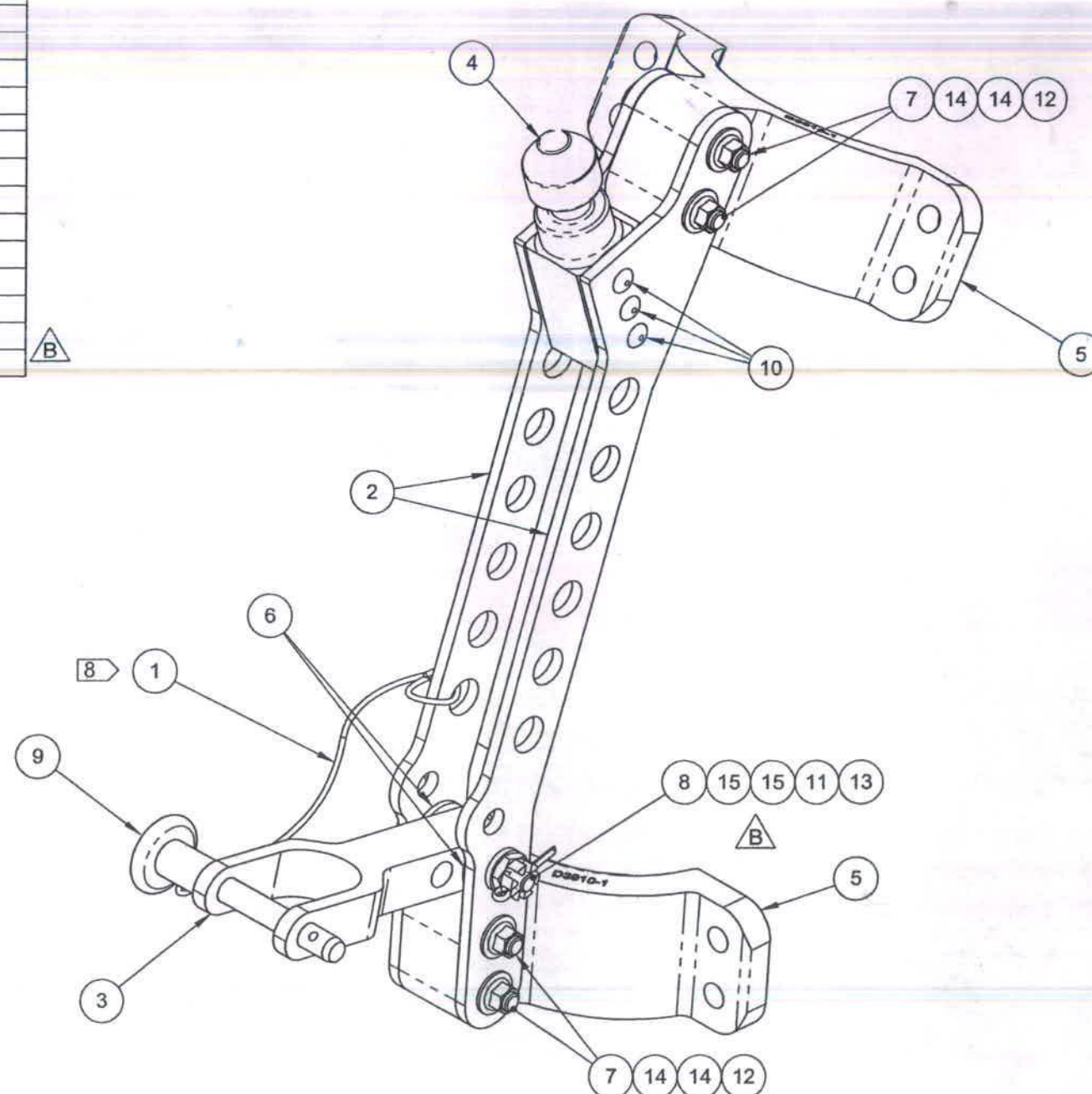
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



ITEM	QTY -041	P/N	DESCRIPTION
	X	D3909-041	FWD X-TUBE LUG ASSY
1	1	D2690-6	LANYARD
2	2	D3909-1	FWD X-TUBE LUG PLATE
3	1	D3909-3	FWD LOWER ATTACH ARM
4	1	D3909-5	EYEBOLT STUD
5	2	D3910-1	X-TUBE LUG
6	2	D3917-1	WASHER
7	4	AN3C12A	BOLT
8	1	AN3C13	BOLT
9	1	MS17984-C413	PIP PIN
10	3	MS20615-4M20	RIVET
11	1	AN310C3	NUT - CASTELLATED
12	4	MS21043-3	NUT
13	1	MS24665-151	COTTER PIN
14	8	NAS1149C0332R	WASHER
15	2	NAS1149C0363R	WASHER



**D3909-041 FWD X-TUBE LUG ASSY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3909-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 1.74 lbs
- 8) ATTACH TO D3909-1 BY LOOPING AROUND LIGHTENING HOLE FIRST AND THEN SECURE TO MS17984-C413 PIP PIN'S RING

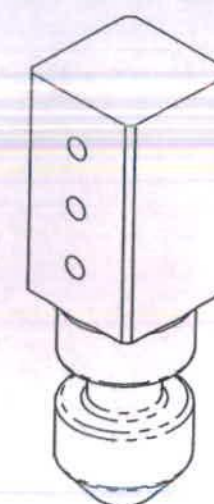
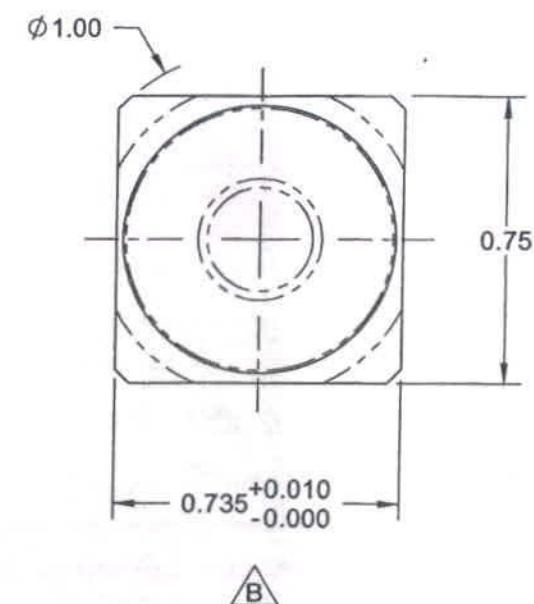
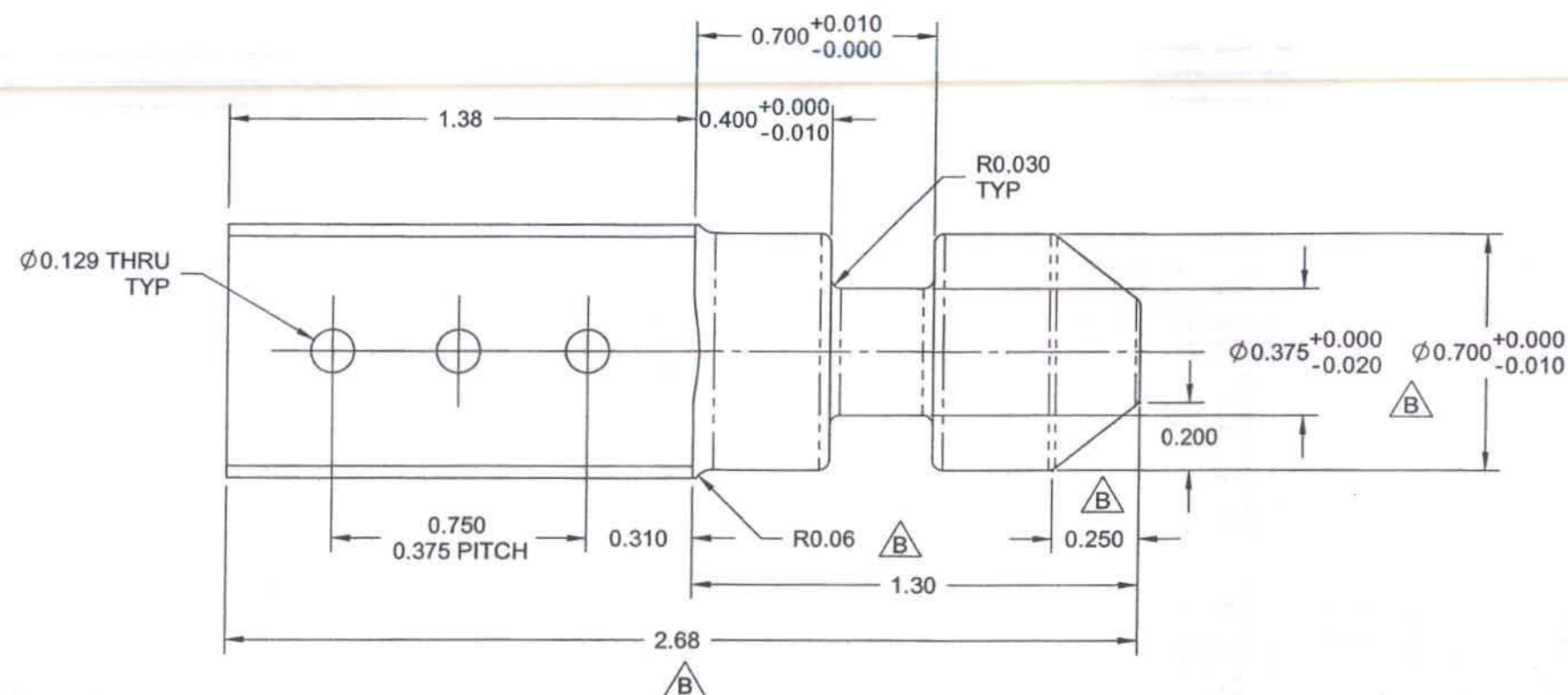
REFERENCE ONLY

**RELEASED**  
2010-04-07

B	BOM: ADDED ITEM 15 QTY 2 NAS1149C0363R ADDED, ITEM 14 QTY 8 WAS 10. SHT 5, D3909-5 REVISED: SECTION A-A & DIM Ø0.650 REMOVED. SIDE VIEW ADDED. DIM: 2.68 WAS 2.38 REF. 1.30 WAS 1.00, 0.250 WAS 0.220, R0.06 WAS R0.05. WEIGHT REVISED.	JPH	10.04.06
A	NEW ISSUE	JPH	10.03.04
REV.	DESCRIPTION	BY	DATE
DESIGN	JPH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	JPH		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3909	SHEET 1 OF 5
APPROVED		TITLE	SCALE
DE APPR.		FWD X-TUBE LUG ASSY	NTS
DATE	10.04.06	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	







REFERENCE ONLY

# **D3909-5 EYEBOLT STUD**

**RELEASED**  
2010-04-07  
MP

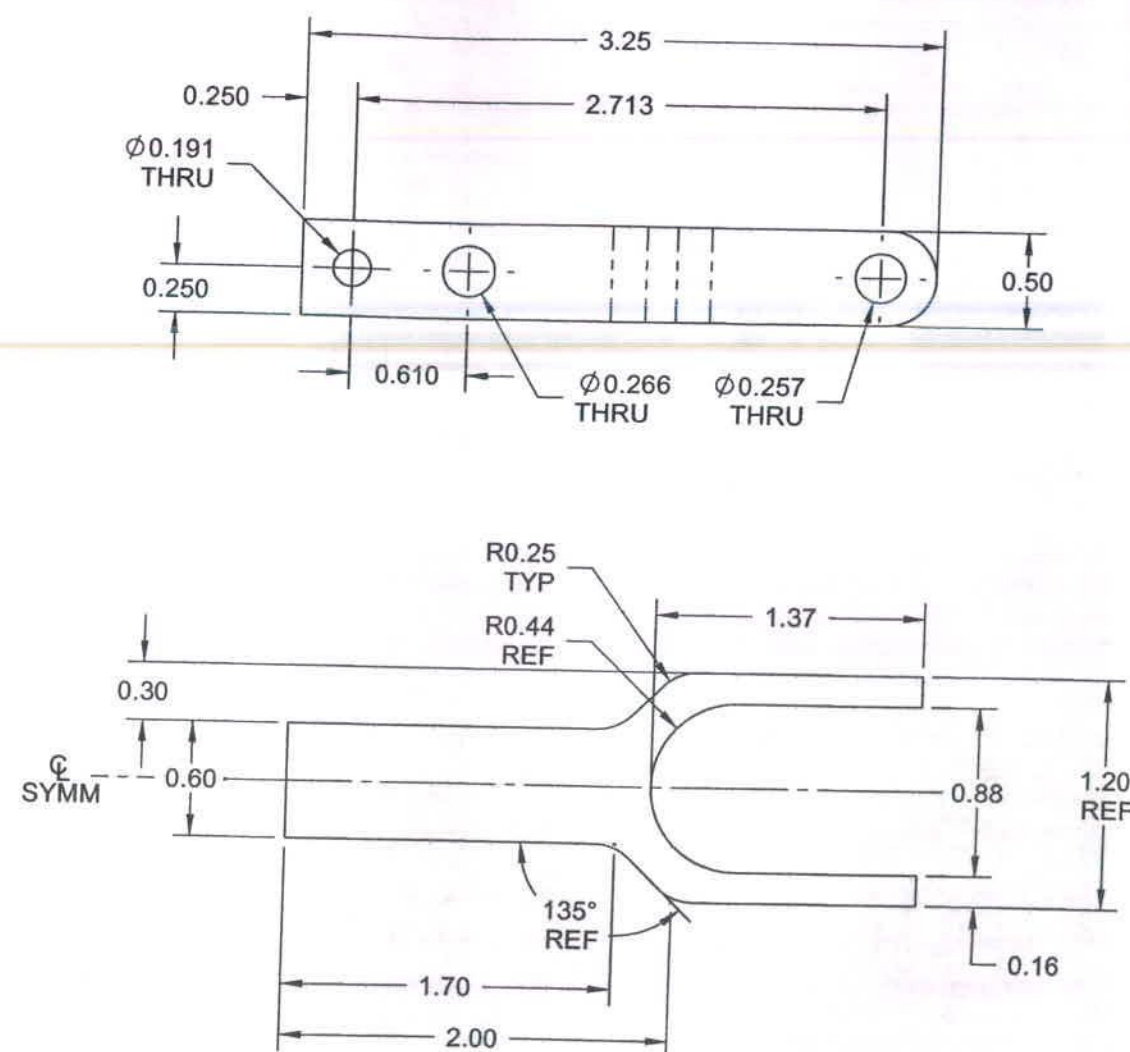
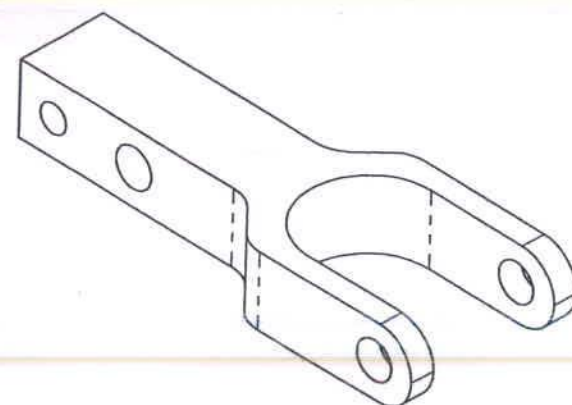
## **NOTES:**

- 1) MATERIAL: 303/304/316 STAINLESS STEEL ROUND BAR, PER ASTM A276 PER DART SPEC M303R OR M304R
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3909-5" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.31 lbs

DESIGN	JPH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	JPH		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3909	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		FWD X-TUBE LUG ASSY	NTS
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**D3909-3 FWD LOWER ATTACH ARM**

**REFERENCE ONLY**

**NOTES:**

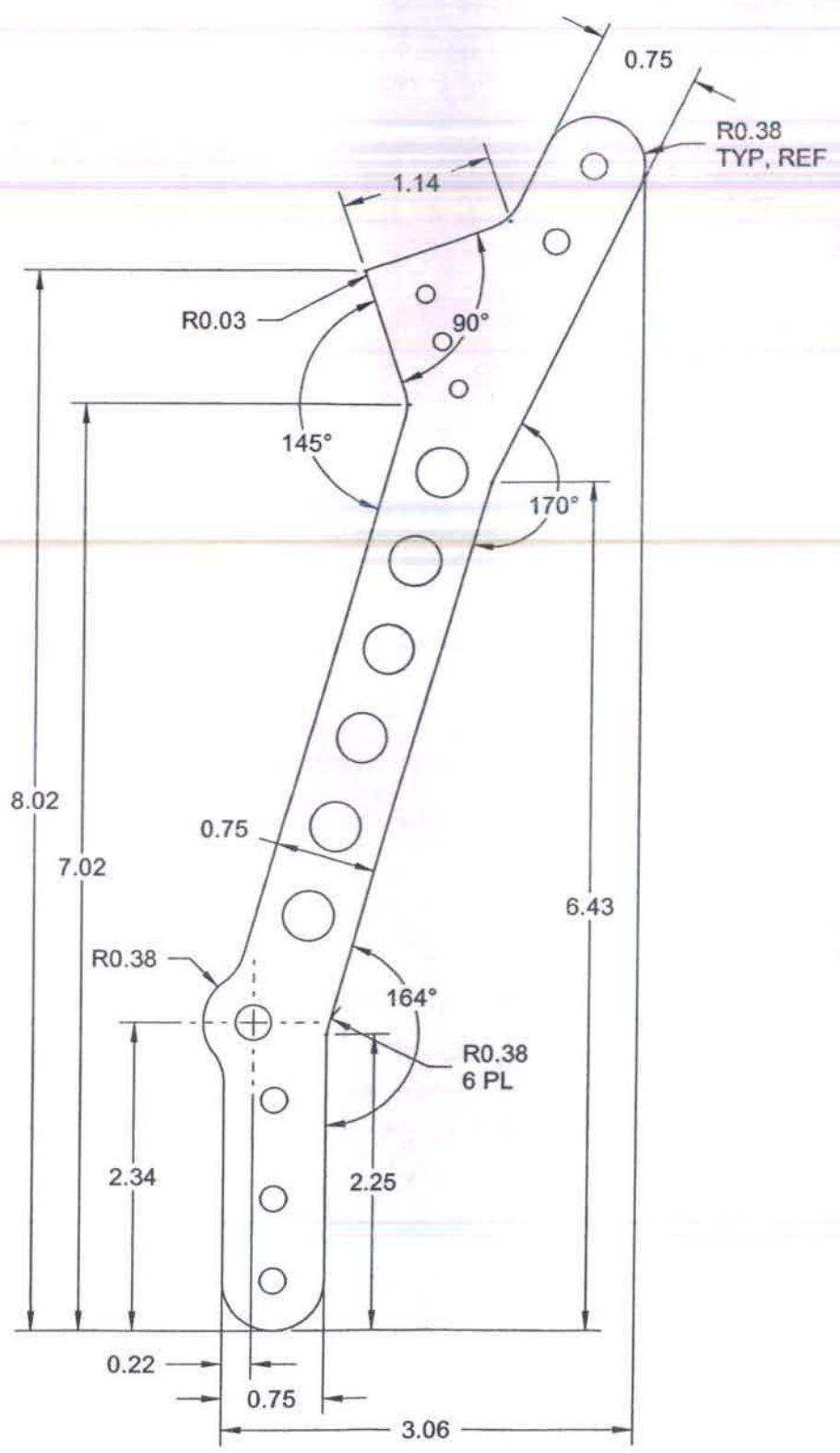
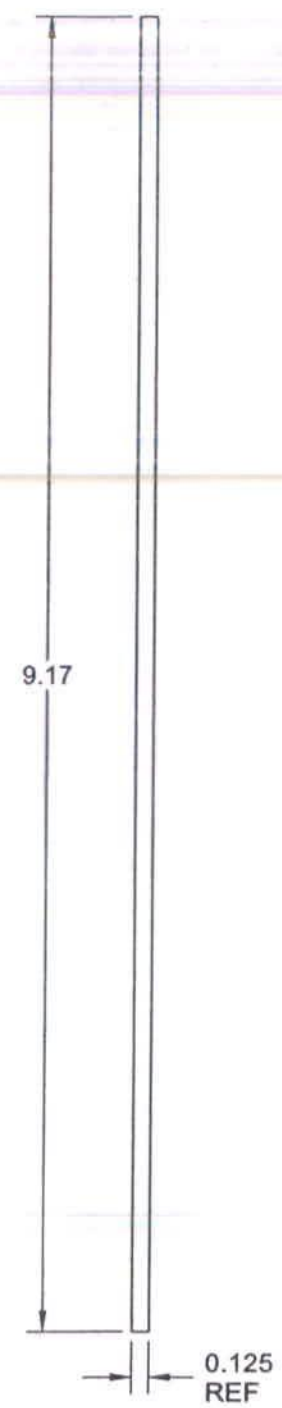
- 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR, PER ASTM A276  
PER DART SPEC M303B OR M304B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.22 lbs

**RELEASED**  
2010-04-07  
*WJP*

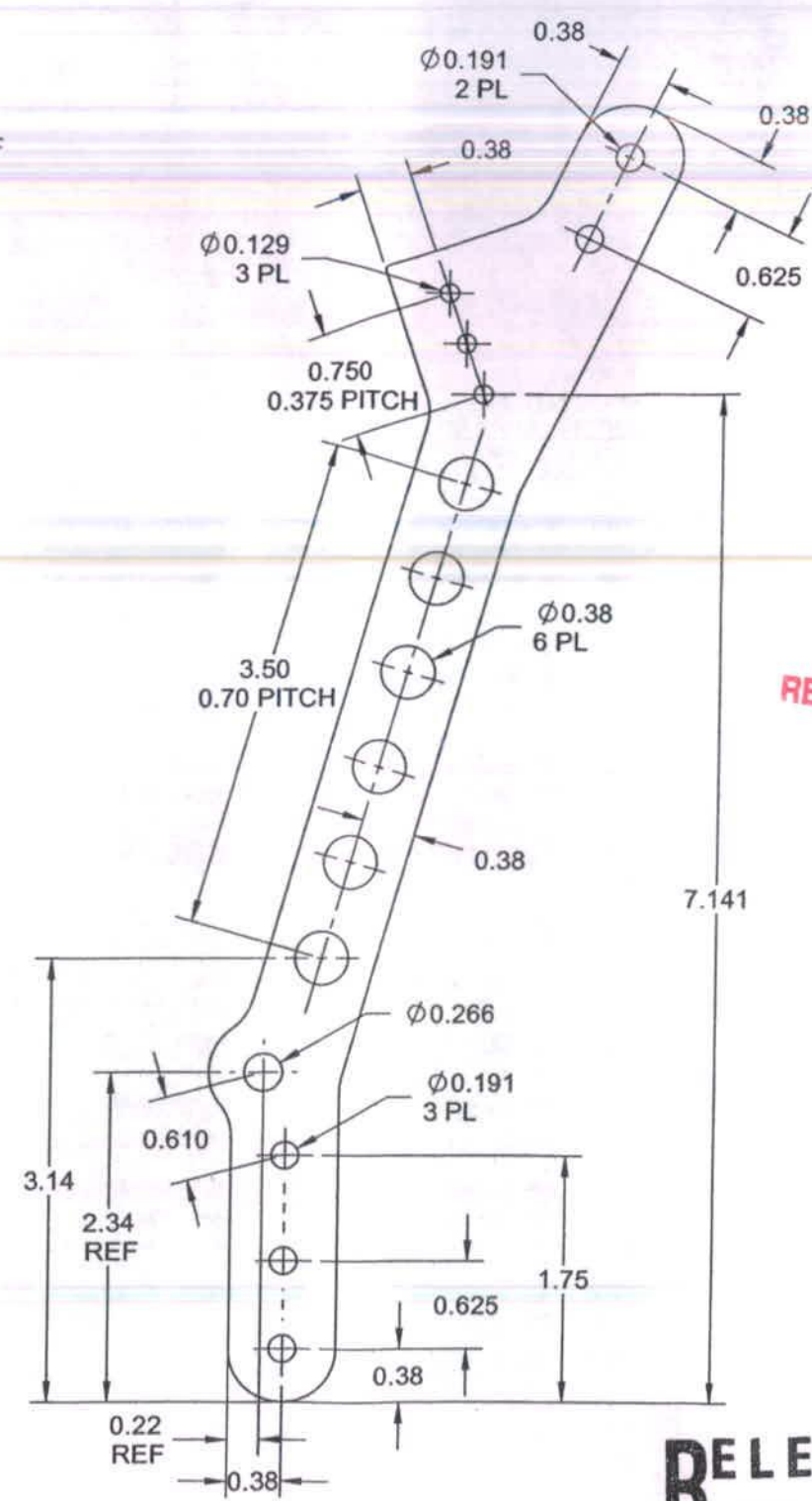
DESIGN	JPH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	DRAWING NO. <b>D3909</b>	REV. B SHEET 4 OF 5
DRAWN	JPH			
CHECKED		TITLE <b>FWD X-TUBE LUG ASSY</b>	SCALE NTS	
MFG. APPR.				
APPROVED		DATE <b>10.04.06</b>		
DE APPR.				
DATE <b>10.04.06</b>				
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**D3909-1 FWD X-TUBE LUG PLATE**



(SUPPLEMENTAL VIEW)

REFERENCE ONLY

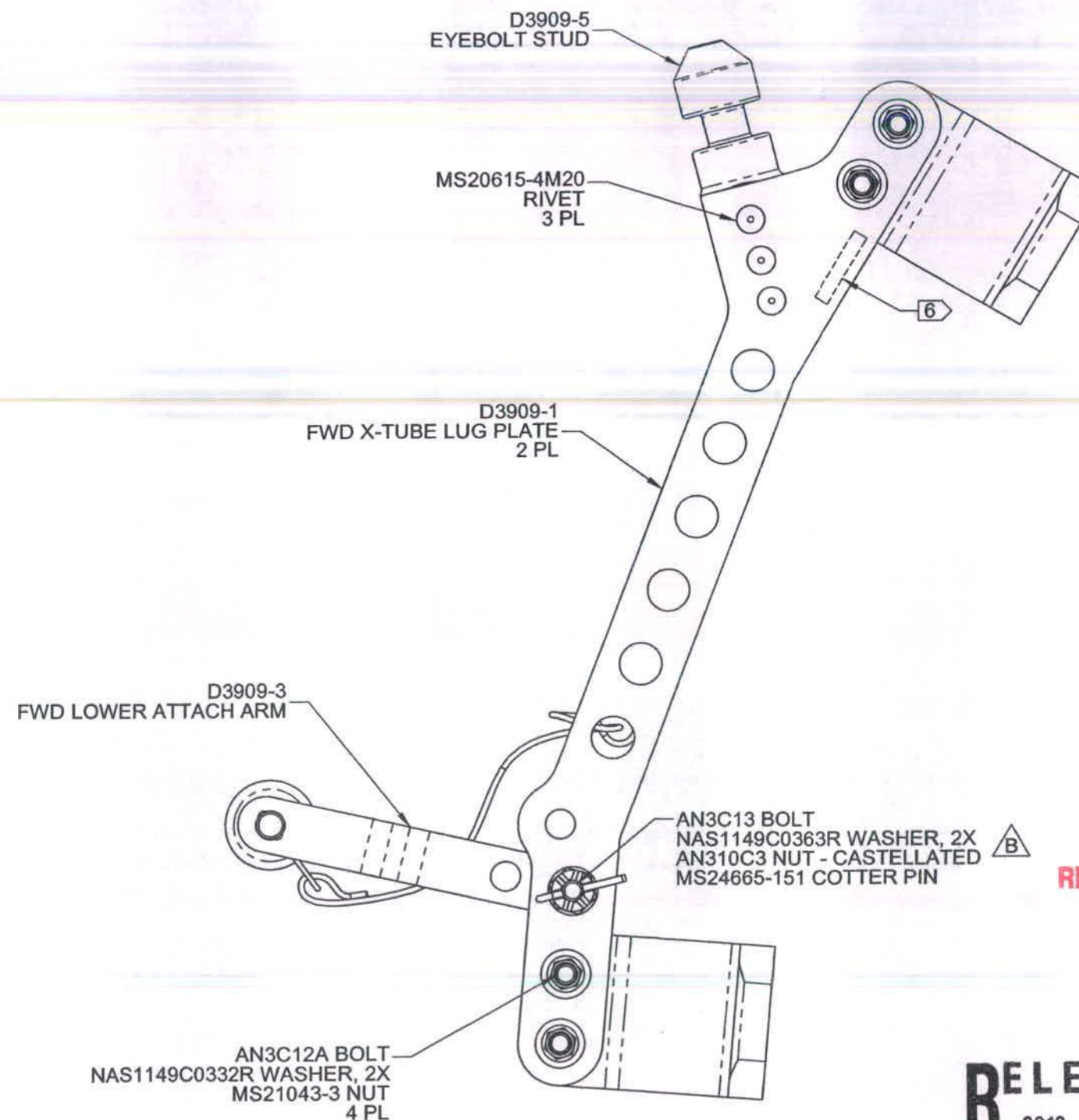
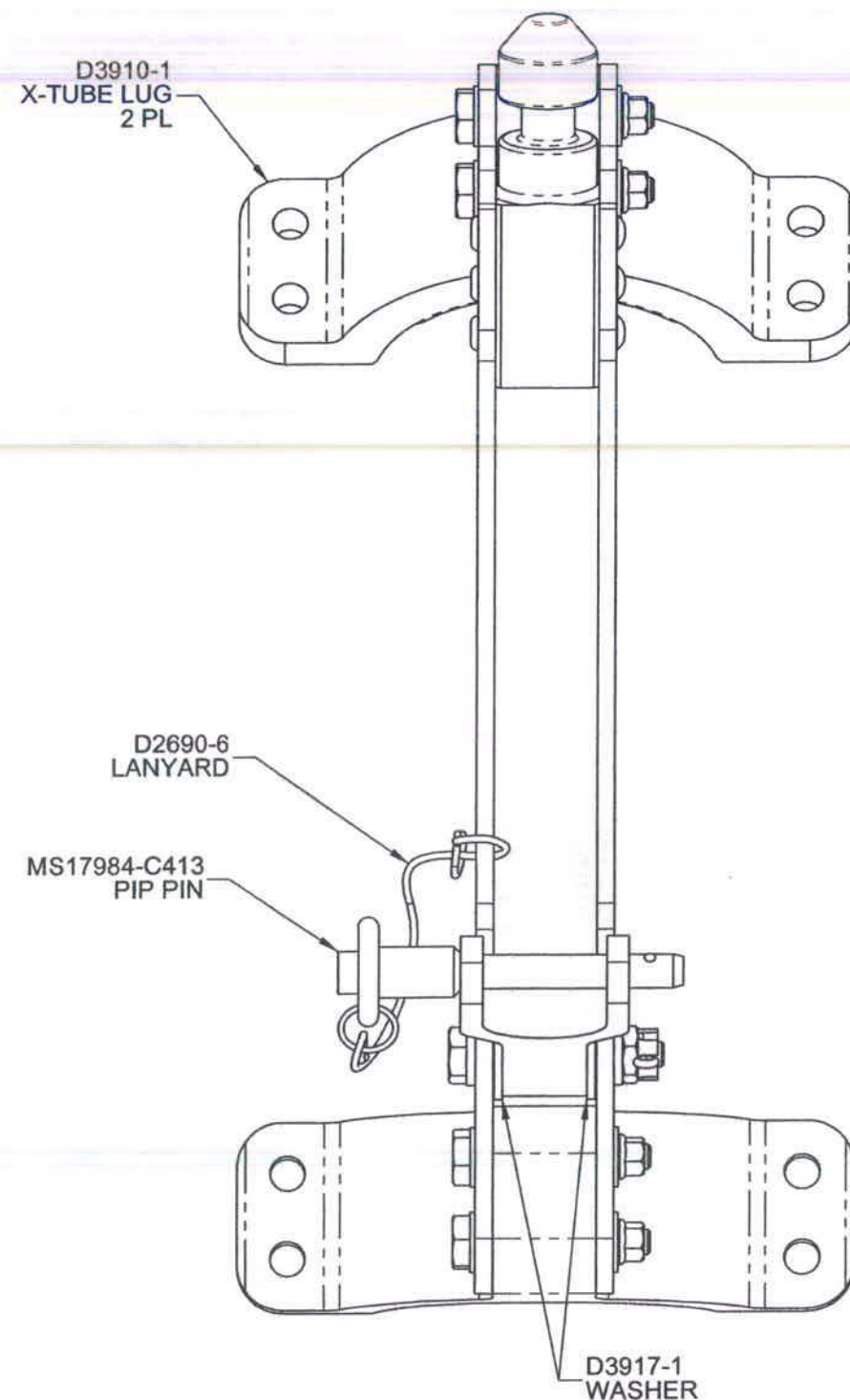
**RELEASED**  
2010-04-07

- NOTES:**
- 1) MATERIAL: 303/304/316 STAINLESS STEEL 0.125" SHEET ANNEALED 2B, PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240 PER DART SPEC M303S11GA OR M304S11GA
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: 0.25 lbs

DESIGN	JPH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	JPH		
CHECKED	<i>[Signature]</i>	DRAWING NO. <b>D3909</b>	REV. B
MFG. APPR.	<i>[Signature]</i>	TITLE <b>FWD X-TUBE LUG ASSY</b>	SHEET 3 OF 5
APPROVED	<i>[Signature]</i>		SCALE NTS
DE APPR.	<i>[Signature]</i>		
DATE	10.04.06	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	







REFERENCE ONLY

**D3909-041 FWD X-TUBE LUG ASSY**

**RELEASED**  
2010-04-07  
*mp*

DESIGN	JPH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	JPH		
CHECKED		DRAWING NO. <b>D3909</b>	REV. B
MFG. APPR.			SHEET 2 OF 5
APPROVED		TITLE <b>FWD X-TUBE LUG ASSY</b>	SCALE NTS
DE APPR.		COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	10.04.06		

1840